



**Town of Surfside
Special Town Commission Workshop
July 15, 2010
7 p.m.**

Town Hall Commission Chambers - 9293 Harding Ave, 2nd Fl
Surfside, FL 33154

AGENDA

1. Opening

- A. Call to Order
- B. Roll Call of Members
- C. Pledge of Allegiance

2. Town Commission Workshop/Water and Sewer Rate Analysis

- A. Water/Sewer Fund Financial Overview – Martin D. Sherwood, Finance Support Services
- B. Water/Sewer State of the Infrastructure Overview – Fernando J. Rodriguez, Director of Public Works and Calvin, Giordano & Associates
- C. Water/Sewer Rate Analysis Overview – Brian Jewett, TischlerBise
 - i. Objectives of Analysis
 - ii. Rate Setting Principles and Approach
 - iii. Presentation of Proposed Water/Sewer Rates
 - iv. Comparative Agency Analysis
 - v. Customer Impact of Proposed Rates


3. Schedule and Next Steps

- A. Tonight: Rate Policy Direction
- B. Community Outreach Meeting & Discussion: 8/3/10 (meeting has been noticed on customer water bills and posted on Town of Surfside website)
- C. First Public Hearing & Ordinance: 8/10/10
- D. Second Public Hearing & Ordinance: 9/14/10

4. Commission Discussion and Rate Policy Direction

5. Adjournment

Respectfully submitted,



Gary L. Word,
Town Manager

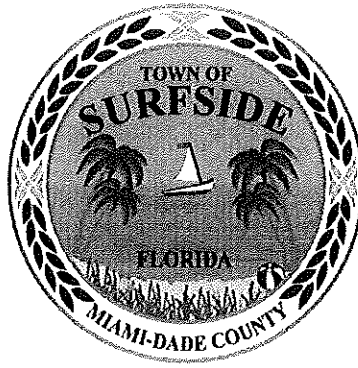
THIS MEETING IS OPEN TO THE PUBLIC. IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT OF 1990, ALL PERSONS ARE DISABLED; WHO NEED SPECIAL ACCOMMODATIONS TO PARTICIPATE IN THIS MEETING BECAUSE OF THAT DISABILITY SHOULD CONTACT THE OFFICE OF THE TOWN CLERK AT 305-893-6511 EXT. 226 NO LATER THAN FOUR DAYS PRIOR TO SUCH PROCEEDING. HEARING IMPAIRED PERSONS MAY CONTACT THE TDD LINE AT 305-893-7936.

IN ACCORDANCE WITH THE PROVISIONS OF SECTION 286.0105, FLORIDA STATUTES, ANYONE WISHING TO APPEAL ANY DECISION MADE BY THE TOWN OF SURFSIDE COMMISSION, WITH RESPECT TO ANY MATTER CONSIDERED AT THIS MEETING OR HEARING, WILL NEED A RECORD OF THE PROCEEDINGS AND FOR SUCH PURPOSE, MAY NEED TO ENSURE THAT A VERBATIM RECORD OF THE PROCEEDINGS IS MADE WHICH RECORD SHALL INCLUDE THE TESTIMONY AND EVIDENCE UPON WHICH THE APPEAL IS TO BE BASED.

AGENDA ITEMS MAY BE VIEWED AT THE OFFICE OF THE TOWN CLERK, TOWN OF SURFSIDE TOWN HALL, 9293 HARDING AVENUE. ANYONE WISHING TO OBTAIN A COPY OF ANY AGENDA ITEM SHOULD CONTACT THE TOWN CLERK AT 305-861-4863. A COMPLETE AGENDA PACKET IS ALSO AVAILABLE ON THE TOWN WEBSITE AT www.townofsursidefl.gov

TWO OR MORE MEMBERS OF OTHER TOWN BOARDS MAY ATTEND THIS MEETING.

THESE MEETINGS MAY BE CONDUCTED BY MEANS OF OR IN CONJUNCTION WITH COMMUNICATIONS MEDIA TECHNOLOGY, SPECIFICALLY, A TELEPHONE CONFERENCE CALL. THE LOCATION 9293 HARDING AVENUE, SURFSIDE, FL 33154, WHICH IS OPEN TO THE PUBLIC, SHALL SERVE AS AN ACCESS POINT FOR SUCH COMMUNICATION.



Water and Sewer Fund

The Town operates its own water and sewer enterprise fund. Town water is purchased from Miami-Dade County and transmitted through Town owned water lines. Wastewater (sewer) runs through the Town's collection system and is discharged under an agreement with the City of Miami Beach.

Fiscal Year 2010 – 2011 Proposed Budget

Water and Sewer Fund FY 2010-2011 Proposed Budget

The Water and Sewer fund is operated under the supervision of the Public Works Director. The utility services are provided by the Town with the goals of providing for the continual supply of quality potable water and the providing for the safe and effective removal of waste water.

To fulfill the water component, the Town purchases water from Miami-Dade county. Due to the early requirement for proposed budget publication, Miami-Dade has not completed its rate development for next year. The current budget anticipates a ten percent (10%) increase to the Town for water delivery. This percentage is preliminary as final rates have not been published. Additional water related responsibilities include water quality testing and water delivery infrastructure maintenance and improvements.

To fulfill the wastewater removal component, the Town contracts with the City of Miami Beach. Miami Beach has not finalized its rates either this early in the budget year. The current expenditures assume a sixteen percent (16%) increase in Town costs for sewage disposal. This percentage is preliminary as final rates have not been finalized by the City of Miami Beach.

Additional wastewater responsibilities include the testing, maintenance, and restoration of the wastewater infrastructure system. Over the next several years, significant rehabilitation of the wastewater system is planned. To fund this program, debt issuance is proposed. Pursuing this project will improve the system, reduce existing problems, and reduce the risk of potential environmental hazards.

For the next several years, major water supply lines are being rehabilitated and/or replaced. To fund this program, debt issuance is proposed. The completion of this project should prove to reduce the amount of water lost in the Town's supply and prevent the potential problems associated with water line collapse.

The Water and Sewer fund also performs functions related to billing and collection for the services provided. The Town provides a number of services for this fund (such as: general management, human resource functions, payroll functions, benefits and pension management, and the provision of office space). The Water and Sewer offsets some of these costs with a service payment of ten percent (10%) of the non-recoverable operating and personnel costs.

Personnel Complement:

Position Title	Funded FY 2010			Funded FY 2011		
	Full Time	Part Time	Temp	Full Time	Part Time	Temp
Public Works Director	0.25			0.25		
Office and Water Coordinator	1			1		
Maintenance Worker	4			4		
Total	5.25	0	0	5.25	0	0

Water Sewer Fund Summary Fiscal Year 2010-2011 Proposed Budget

FY 2010 Estimated

Estimated Water and Sewer Utility Service Revenues	2,570,966
Appropriation from Net Assets	37,337
Estimated Expenditures & Encumbrances	(2,608,303)
Estimated FY 2010 Excess of Revenues over Expenditures	<u>0</u>

Projected Unrestricted Net Assets

Audited Unrestricted Net Assets 9/30/2009	448,793
Estimated FY 2010 Excess of Revenues over Expenditures	0
Projected Unrestricted Net Assets 9/30/2010	<u>448,793</u>
Appropriated Unrestricted Net Assets for FY 2011	0
Projected Unrestricted Net Assets 9/30/2011	<u>448,793</u>

FY 2011 Budget Summary

Projected Revenue

Service Revenues	3,564,201
Interest Earnings and Impact Fees	0
Loan Proceeds for Capital Projects	8,138,300
Appropriated Restricted Net Assets	0
Total Revenue	<u>11,702,501</u>

Proposed Expenditures

Personnel Costs	297,085
Operating Items	2,346,381
Capital Outlay	8,149,500
Debt Service Costs	765,304
Non-Operating Costs	144,231
Total Expenditures	<u>11,702,501</u>

Preliminary indications are that a 38.6% increase to water rates and a 39.3% increase to wastewater (sewer) rates will be required to fund the capital projects and anticipated cost increases for services to the Town

TOWN OF SURFSIDE, FLORIDA

**STATEMENT OF NET ASSETS
PROPRIETARY FUNDS**

SEPTEMBER 30, 2009

DRAFT

	<u>Water and Sewer</u>
Assets	
Current Assets	
Cash and cash equivalents	\$ 1,162,969
Accounts receivables, net	829,748
Due from other funds	--
Prepaid items	<u>3,024</u>
Total Current Assets	<u>1,995,741</u>
Noncurrent Assets	
Restricted assets	
Cash and cash equivalents	389,739
Investments	<u>12,304</u>
Total restricted assets	<u>402,043</u>
Capital Assets	
Construction in progress	306,669
Infrastructure	1,273,253
Equipment	<u>145,341</u>
	1,725,263
Less accumulated depreciation	<u>(1,245,394)</u>
Total Capital Assets, Net	<u>479,869</u>
Total Noncurrent Assets	<u>881,912</u>
Total Assets	<u>2,877,653</u>
Liabilities	
Current Liabilities	
Accounts payable	321,627
Accrued liabilities	245,903
Due to other funds	--
Compensated absences	3,066
Unearned revenue	12,442
Payable from restricted assets	
Customer deposits	<u>123,645</u>
Total Current Liabilities	<u>706,683</u>
Noncurrent Liabilities	
Compensated absences	<u>27,596</u>
Total Noncurrent Liabilities	<u>27,596</u>
Total Liabilities	<u>734,279</u>
Net Assets	
Invested in capital assets	479,868
Restricted for renewal and replacement	1,214,713
Unrestricted (deficit)	<u>448,793</u>
Total Net Assets	<u>\$ 2,143,374</u>

Funded – Dependent Upon Rate Increase

Town of Surfside, FL

Capital Improvement Project

Project:	Wastewater (Sewer) System Rehabilitation Program						
Priority:	1	Project Manager:		Calvin, Giordano, & Associates			
Department:	Public Works	Division:		Water/Sewer			
Project Location:	Town-wide Wastewater (Sewer) System						
Fiscal Year:	FY 11	FY 12	FY 13	FY 14	FY 15	5 year Total	PRIOR FYs
Plans and Studies:							\$135,000
Engineering/ Architecture:	\$78,200	\$26,000				\$104,200	\$206,988
Land Acquisition/ Site Preparation:							
Construction:	\$3,908,900	\$1,023,123				\$4,932,023	\$280,000
Equipment/ Furnishings:							
Other (Specify):							
TOTAL COST:	\$3,987,100	\$1,049,123				\$5,036,223	\$621,988
Revenue Source:	WUB/WS	WUB/WS					WUB/WS

Description (Justification and Explanation)

Sewer Rehabilitation Plan: The Sewer Rehabilitation Plan will be broken into three phases. Phase I will bring the town into partial compliance with the mandates from DERM. Phase II and III will complete the requirements as outlined in the Sanitary Sewer Evaluation Study (SSES).

Phase I: Phase I was completed by placing full dish gaskets on all manhole openings. In addition, any rain water leaders found to be attached to the sewer lines shall be disconnected from the sanitary sewer system. Any cleanouts that are open to the elements will also to be capped. These last two tasks should be at no cost to the city, as this is in violation and the responsibility of the individual home owner.

Phase II: Phase II requires investigating sewer problems using video, smoke testing and other techniques to determine the sources of infiltration / inflow. All broken pipes will be repaired or lined, as determined by the analysis. Severely deteriorated manholes will be sealed with a "Supercoat" system or full liner.

Phase III: Phase III will consist of renovating the existing pump stations. The pumps and controls along with generators will be replaced.

Future Annualized Impact on Operating Budget

Personnel:	\$45,000	Post Phase Program: After the Phases have been implemented, the city should develop a continuing program to maintain the sewer system, consisting of: 1) Smoke testing, 2) Replace leaking manholes and cleanout caps, 3) Raise manhole ring and cover assemblies where necessary, 4) Grout and seal manholes and gravity sewer pipe where necessary, 5) Lined gravity sewer pipe, and 6) Inflow prevention devices for all new manholes. Costs to the left represent estimates for proper maintenance of these program components.
Operating:	\$45,000	
Replacement Costs:	5,212,023/20 years = \$260,601	
Revenue/Other:	Debt Service = \$377,151	
Total:	\$727,752	

Funded – Dependent Upon Rate Increase

Town of Surfside, FL Capital Improvement Project							
Project:	Water System Maintenance Program						
Priority:	2	Project Manager:	Calvin, Giordano & Associates				
Department:	Public Works	Division:	Water/Sewer				
Project Location:	Town-wide water system						
Fiscal Year:	FY 11	FY 12	FY 13	FY 14	FY 15	5 year Total	PRIOR FYs
Plans and Studies:							
Engineering/Architecture:	\$83,200	\$31,000				\$114,200	\$127,974
Land Acquisition/ Site Preparation:							
Construction:	\$4,158,000	\$1,766,371				\$5,924,371	\$381,000
Equipment/ Furnishings:							
Construction Service							
TOTAL COST:	\$4,241,200	\$1,797,371				\$6,038,571	\$508,974
Revenue Source:	WUB/WS	WUB/WS					WUB/WS
Description (Justification and Explanation)							
<p>This project provides for the replacement of several miles of water system pipe known to be in particularly poor repair. The replacement program is projected over the next several years. It addresses only those existing iron water pipes that are believed to be either undersized, corroded, or both. A replacement program is long overdue for the entire system, including valves and hydrants. The 5-year CIP addresses minimal repairs only to maintain the current level of service.</p> <p>Appropriations for this project have been provided in prior years amounting to \$508,974 (FY 2008, FY 2009 and FY 2010). These prior appropriations may be added to the prospective 5 year total to identify the complete project total. The total project cost is estimated at \$6,547,545.</p> <p>To reduce the costs of financing and to utilize reserves for their intended purpose, funding is proposed through a combination of water and sewer fund reserves and financing. Grant funding and replacement reserves offset the anticipated loan amount.</p> <p>\$375,000 is included in this form to cover the wireless meter reading system. Includes \$30,000 tower. Anticipates changing out about 600 non – transponder meters and adding transponders to other meters.</p>							
Future Annualized Impact on Operating Budget							
Personnel:			<p>This project improves the system and will predictably lower maintenance costs for the next several decade.</p> <p>Annualized costs for Renewal and Replacement for this system is estimated at \$210,179.</p> <p>Debt Service = \$318,154 annually. This debt service figures assumes a 20 year term at a simple 5% rate.</p>				
Operating:							
Replacement Costs:	\$6,305,371/30 = \$210,179						
Revenue/Other:	Debt Service = \$318,154						
Total:	\$528,333						

PROPOSED SCHEDULE OF FINANCING

Water / Sewer Fund

<u>Department</u>	<u>Projects/Equipment</u>	<u>Amount</u>
Public Works	Wastewater System Rehabilitation Program	\$4,762,322
Public Works	Water System Maintenance Program	\$4,901,261
Sub-total		<u><u>\$9,663,582</u></u>
Total		<u><u>\$9,663,582</u></u>
Annual Debt Service (20 years @ 5%).		<u>\$765,304</u>

Memorandum



TO: Martin D. Sherwood, Town of Surfside
FROM: Brian Jewett, TischlerBise
DATE: July 12, 2010
SUBJECT: Water and Sewer Utility Draft Rate Analysis and Options

This memorandum is to verify the assumptions and budgetary figures (revenue and expenditures) for purposes of the water and sewer utility rate analysis. It also demonstrates 1) the amount of rate revenue required for the utility fund to meet its operating, capital and projected debt service obligations, and 2) the fund net asset balances compared to proposed Town fund policy objectives.

Additionally, this memorandum summarily describes the cost allocation process for both utilities as well as presents the rate structure options and proposed rates for each option. Finally, we have presented several customer impact graphs to demonstrate the effect of the proposed rates on sample customer classes within each option.

Project Assumptions

For the Town of Surfside to more accurately project future revenues and expenditures, growth, inflation and financial factors are estimated for each utility system (see **Table 1**). After an initial project meeting, several telephone calls with Town staff, and data and documentation reviews, we have confirmed our assumptions within this table.

Escalation Factors – Because of current economic conditions and the developed nature of the Town, we have applied a nominal growth rate to new customer connections for the projection period of five fiscal years. In addition to these factors, we have also included several escalation or inflation factors for various operating and capital items associated with both utilities. Where past annual increases were consistent, we applied historical percentages to our forecast analysis. Where past annual increases were volatile or lacked a consistent pattern, we applied percentage increases based on our past experiences in utility rate and projection analyses.

Net Asset Targets – Currently the Town designates reserves as a component of Net Assets. The Net Asset balance consists of investment in capital assets and restricted and unrestricted assets for a combined water and sewer total net assets. Some of the funds have been utilized for capital assets while renewal and replacement are restricted for capital project needs. Finally, unrestricted net assets can be used for any future item related to the utility fund operations or capital needs. Currently, the Town does not have formal fund net asset balance target policies in place.

We recommend that the Town adopt target policy levels for three proposed restricted fund categories *for each utility system*:

- Unrestricted Net Assets – Operating Reserves (to be set up to 25 percent of each utility's annual Operations and Maintenance Expenses). This component would ensure each utility system has sufficient cash on hand to cover emergencies, working capital needs or unexpected contingencies associated with operating the utility. Three months or a 25 percent reserve balance is a standard within the utility rate setting industry and gives the Town adequate coverage.
- Restricted Net Assets – Renewal and Replacement Reserves (to be set up to 2 times annual renewal and replacement costs for the current 5-year improvement plan for each utility system). This component would ensure each utility system has sufficient reserves to cover future major capital repair and replacement (R&R) needs for a short-term period until Town officials decide to issue future debt if major upgrades or replacements are required, or minor R&R needs on an on-going basis without the need for additional borrowing. There is no industry standard amount to be set aside for future R&R needs. However, many rate structures and studies include some amount of future annualized capital project costs for their R&R reserves. For this analysis, we utilized the upcoming 5-year CIP for each utility as our basis and projected annualized impact of each CIP. We believe that a 2-year annualized figure will give the Town enough R&R reserves to fund future capital needs in the short term without relying on additional rate increases or emergency loans.
- Restricted Net Assets – Rate Stabilization Reserves (to be set up to 10 percent of each utility's current year projected rate revenues). This component would ensure each utility system has sufficient reserves to handle potential short-term cash flow interruptions associated with contracted water purchase and sewage disposal costs. While there is no industry standard for a target amount of rate stabilization reserves, our experience demonstrates a 10 percent figure is prudent and not a significant burden on utility rates.

Financial Ratios and Inputs – Certain financial ratios and assumption are utilized to account for Town central service support of the utility systems, bond covenant debt coverage ratios and financing terms for project revenue bonds to be issued, and an affordability index to demonstrate the affect potential rate increases might have on Surfside customers household income levels.

Table 1: Inputs and Financial Assumptions

Description	Annual Figure	Notes
Escalators		
Residential Customer Growth Rate	0.25%	Annual Rate
Non-residential Customer Growth Rate	0.25%	Annual Rate
Personnel Costs	2.00%	Annual Rate
Water Purchases	12.00%	Annual Rate
Sewage Disposal Costs	15.00%	Annual Rate
Operating Costs	3.50%	Annual Rate
Capital Outlay (excl Improvements)	5.00%	Annual Rate
Depreciation Costs	2.00%	Annual Rate
Fund Equity Targets		
O&M Reserves	25.0%	25% of current year O&M
Water Capital Reserves	\$ 420,358	2x annualized costs of renewal and replacement of FY11-FY15 CIP
Sewer Capital Reserves	\$ 521,202	2x annualized costs of renewal and replacement of FY11-FY15 CIP
Rate Stabilization Reserves	10.0%	10% of current year projected rate revenues
Financial Ratios and Inputs		
Indirect Cost Allocation (GF Reimburse)	10.0%	of central service support to utility fund
Debt Service Coverage Ratio	125%	1.25x (net operating income/annual debt service)
Affordability Index	2.0%	of Surfside's Median Household Income
Bonds/Loans	Terms	
Revenue Bonds Period (years)	20	
Revenue Bonds Interest Rate	5.00%	
Construction Amount	\$ 10,000,000	

Sources: Town of Surfside; TischlerBise.

Utility Revenues and Expenditures

Table 2 illustrates the line item revenues that will be incorporated into the rate analysis for each utility. Water sales and sewer service charges are presented with no rate increases and are inflated by a nominal growth factor of 0.25 percent per year to account for modest new connection growth. Other revenue items are assumed to remain flat to demonstrate a conservative projection analysis.

Table 2: Utility Revenue Summary

Revenue Item	[----- Projected -----]					
	FY 09/10	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15
Water Revenues						
Water Sales (no rate increase)	\$ 1,302,000	\$ 1,308,510	\$ 1,315,053	\$ 1,321,628	\$ 1,328,236	\$ 1,334,877
Tapping Fees	300	300	300	300	300	300
Penalties	870	870	870	870	870	870
Total Water Revenues	\$ 1,303,170	\$ 1,309,680	\$ 1,316,223	\$ 1,322,798	\$ 1,329,406	\$ 1,336,047
Wastewater Revenues						
Sewer Service Charges (no rate increase)	\$ 1,404,314	\$ 1,411,336	\$ 1,418,392	\$ 1,425,484	\$ 1,432,612	\$ 1,439,775
Penalties	870	870	870	870	870	870
Total Wastewater Revenues	\$ 1,405,184	\$ 1,412,206	\$ 1,419,262	\$ 1,426,354	\$ 1,433,482	\$ 1,440,645
Miscellaneous Revenues						
Water Interest Income	\$ 2,128	\$ 2,128	\$ 2,128	\$ 2,128	\$ 2,128	\$ 2,128
Wastewater Interest Income	2,128	2,128	2,128	2,128	2,128	2,128
Water Impact Fees	500	500	500	500	500	500
Wastewater Impact Fees	500	500	500	500	500	500
Total Misc. Revenues	\$ 5,256	\$ 5,256	\$ 5,256	\$ 5,256	\$ 5,256	\$ 5,256

Source: Town of Surfside; TischlerBise.

Table 3 presents the combined system utility fund expenditures based on the latest figures from the Fiscal Year 2010/11 utility budget and projected through FY 2014/15. Budget line items are categorized into functional components to be utilized in the forthcoming cost allocation analysis. Budget line items are escalated by various projection factors found in Table 1. The basis for escalation and the division of costs to each utility are located in the last three columns of Table 3. The division of costs is largely-based on the ratio of the two largest line items in the fund: Water Purchases and Sewage Disposal. The exceptions to this approach are Miscellaneous Maintenance – Water Tests and Discounts Taken which apply solely to the water utility and allocated accordingly.

Table 3: Water and Sewer Fund Total Expenditures

Budget Item	Acct Code Suffix	Budgeted 2010/11	Projected 2011/12	Projected 2012/13	Projected 2013/14	Projected 2014/15	Escalation Basis	% to Water	% to Sewer
Personnel Expenses									
Regular Salaries	1210	\$ 200,809	\$ 204,825	\$ 208,922	\$ 213,100	\$ 217,362	Personnel	46%	54%
Other Salaries	1310	-	-	-	-	-	Personnel	46%	54%
Overtime	1410	14,000	16,100	16,422	16,750	17,085	Personnel	46%	54%
Special pay	1510	4,500	4,658	4,751	4,846	4,943	Personnel	46%	54%
Payroll Taxes	2110	16,777	17,113	17,455	17,804	18,160	Personnel	46%	54%
Retirement Contribution	2210	15,436	15,436	15,745	16,059	16,381	Personnel	46%	54%
Life & Health Insurance	2310	33,512	33,512	34,182	34,866	35,563	Personnel	46%	54%
Workers Compensation	2410	9,104	9,104	9,286	9,472	9,662	Personnel	46%	54%
Unemployment Compensation	2510	-	-	-	-	-	Personnel	46%	54%
Total Personnel Expenses		294,138	300,747	306,762	312,897	319,155			
Operating Expenses									
Professional Services	3110	12,000	12,420	12,855	13,305	13,770	Operating	46%	54%
Lawsuits and Prosecutions	3111	-	-	-	-	-	Operating	46%	54%
Physical Examinations	3112	-	-	-	-	-	Operating	46%	54%
Accounting and Auditing	3210	-	-	-	-	-	Operating	46%	54%
Water Purchases	3401	752,640	842,957	944,112	1,057,405	1,184,294	Water Purchase	100%	0%
Sewage Disposal	3402	834,197	959,327	1,103,226	1,268,710	1,459,016	Sewage Disposal	0%	100%
Other Contractual Services	3410	1,500	1,553	1,607	1,663	1,721	Operating	46%	54%
Nuisance Abatement	3411	-	-	-	-	-	Operating	46%	54%
Car Allowance	4009	1,500	1,553	1,607	1,663	1,721	Operating	46%	54%
Travel & Per Diem	4010	-	-	-	-	-	Operating	46%	54%
Board Expenses	4011	-	-	-	-	-	Operating	46%	54%
Telecommunications	4110	1,000	1,035	1,071	1,109	1,148	Operating	46%	54%
Postage	4111	4,080	4,223	4,371	4,524	4,682	Operating	46%	54%
Electricity	4310	40,198	41,605	43,061	44,568	46,128	Operating	46%	54%
Water and Sewer	4311	-	-	-	-	-	Operating	46%	54%
Building Rents/Leasing	4402	-	-	-	-	-	Operating	46%	54%
Equipment/Vehicle Leasing	4403	16,170	16,736	17,322	17,928	18,555	Operating	46%	54%
Property and Liability Insurance	4510	17,695	18,314	18,955	19,619	20,305	Operating	46%	54%
Maintenance Service/Repair Contracts	4601	50,000	51,750	53,561	55,436	57,376	Operating	46%	54%
Building Maintenance	4602	-	-	-	-	-	Operating	46%	54%
Equipment Maintenance	4603	34,000	35,190	36,422	37,696	39,016	Operating	46%	54%
Grounds Maintenance	4604	-	-	-	-	-	Operating	46%	54%
Miscellaneous Maintenance - Water Tests	4611	5,000	5,175	5,356	5,544	5,738	Operating	100%	0%
Vehicle Maintenance	4612	4,000	4,140	4,285	4,435	4,590	Operating	46%	54%
Printing & Binding	4710	-	-	-	-	-	Operating	46%	54%
Promotional Activities	4810	-	-	-	-	-	Operating	46%	54%
Discounts Taken	4901	60,000	62,100	64,274	66,523	68,851	Operating	100%	0%
Other Current Charges	4911	-	-	-	-	-	Operating	46%	54%
Office Supplies	5110	2,000	2,070	2,142	2,217	2,295	Operating	46%	54%
Property and Maintenance	5210	-	-	-	-	-	Operating	46%	54%
Landscape Improvements	5213	-	-	-	-	-	Operating	46%	54%
Uniforms	5214	2,846	2,946	3,049	3,155	3,266	Operating	46%	54%
Tires	5215	-	-	-	-	-	Operating	46%	54%
Gasoline	5216	2,500	2,588	2,678	2,772	2,869	Operating	46%	54%
Miscellaneous Operating Supplies	5290	250	259	268	277	287	Operating	46%	54%
Road Materials	5310	-	-	-	-	-	Operating	46%	54%
Subscriptions and Memberships	5410	-	-	-	-	-	Operating	46%	54%
Conferences and Seminars	5420	-	-	-	-	-	Operating	46%	54%
Depreciation	5901	55,000	56,100	57,222	58,366	59,534	Depreciation		
Total Operating Expenses		1,896,576	2,122,039	2,377,442	2,666,915	2,995,163			

Table 3: Water and Sewer Fund Total Expenditures

Budget Item	Acct Code Suffix	Budgeted 2010/11	Projected 2011/12	Projected 2012/13	Projected 2013/14	Projected 2014/15	Escalation Basis	% to Water	% to Sewer
Capital Outlay (excl Improvements)									
Buildings	6210	-	-	-	-	-	Capital	46%	54%
Machinery and Equipment	6410	11,200	11,760	12,348	12,965	13,614	Capital	48%	54%
Total Capital Outlay (excl Improvements)		11,200	11,760	12,348	12,965	13,614			
Non-operating Expenses									
Transfer to General Fund ¹	9150	60,421	62,536	64,724	66,990	69,334	Operating	46%	54%
Contingency/Reserve	9310	83,811	-	-	-	-	Operating	46%	54%
Total Capital Outlay (excl Improvements)		144,232	62,536	64,724	66,990	69,334			
Total Expenditures less Improvements & Debt Service		\$ 2,346,146	\$ 2,497,082	\$ 2,761,277	\$ 3,059,768	\$ 3,397,266			

1. Ten percent (10%) of Fund expenses less Water Purchases, Sewage Disposal and Contingency/Reserve.

Sources: Town of Surfside; TischlerBise

Water System Rate Analysis

The following section describes the revenue requirements analysis for the water utility.

Revenue Requirements Analysis

Table 4 presents the water-related 5-year capital improvement plan as prepared by the Town's engineering consultant. The table lists the outside funding sources to be utilized for the capital projects including accumulated restricted and unrestricted net asset reserves, Build Better Communities (BBC) reimbursement monies, nominal water impact fees, and bond proceeds from a proposed revenue bonds issue for both water and sewer related capital construction projects. The combined effect of these outside funding sources is to eliminate the need for future rate revenues to directly fund these projects. However, the rates will be required to fund the debt service obligations on the revenue bonds.

Table 4: Allocated Water Capital Improvement Program

Project	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15	Total
Engineering/Architecture	\$ 83,200	\$ 31,000	\$ -	\$ -	\$ -	\$ 114,200
Construction	4,158,000	1,766,371	-	-	-	5,924,371
Prior CIP Appropriations	508,974	-	-	-	-	508,974
Total Water Capital Projects	\$ 4,750,174	\$ 1,797,371	\$ -	\$ -	\$ -	\$ 6,547,545
Less: Outside Funding Sources						
Water Impact Fees	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	
Restricted Net Assets - Repair & Replacement	660,000	-	-	-	-	
Unrestricted Assets	172,000	-	-	-	-	
BBC Reimbursement	715,000	-	-	-	-	
Revenue Bonds Proceeds	5,000,000	-	-	-	-	
Carry-over from Prior FY	-	1,797,326	455	955	1,455	
Total Outside Funding	\$ 6,547,500	\$ 1,797,826	\$ 955	\$ 1,455	\$ 1,955	
Balance to Carry Over to Next FY	\$ 1,797,326	\$ 455	\$ 955	\$ 1,455	\$ 1,955	
Net CIP Projects Funded from Rates	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Source: Town of Surfside; TischlerBise.

Tables 5a and 5b summarize the draft financial analysis for the water system. These tables include projected annual revenues anticipated using rate increases, the operating and non-operating expenses, debt service requirements, and net income calculations. The purpose of two tables is to show two funding options we proposed to the Town: one option includes the current discount program available to Surfside water customers (a 5% reduction of the water bill and related water tax should customers pay their water bill within 10 days of the date of bill) while the other option recommends eliminating the discount program.

Current projections show that the discount program costs the utility fund an additional \$60,000 in expense. This expense can affect the fund's cash flow balance and also poses an equity issue as other customers not utilizing the program may be subject to slightly higher rates to subsidize the program. Additionally, Town finance staff experience significantly high in-person customer requests for the program resulting in additional time and resources to process the discounts. For these reasons, we recommend that the Town eliminate the discount program.

Tables 6a and 6b present the fund balance information as described earlier in this memorandum for each option. Please note that the required revenue increase percentages do not equate to the proposed rate increase for each customer. Rather, *these percentage figures describe the amount of additional rate revenue required to meet all utility obligations and policies.*

Table 5a: Water Revenue Requirements Analysis (Discount Included)

Description	Base Year [----- Projected -----]				
	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15
Operating Revenue					
Water Sales (before increase)	\$ 1,305,255	\$ 1,308,518	\$ 1,311,789	\$ 1,315,069	\$ 1,318,357
Tapping Fees	300	300	300	300	300
Penalties	870	870	870	870	870
Total Operating Revenue	1,308,425	1,309,688	1,312,959	1,316,239	1,319,527
Additional Rate Revenue Required					
	<i>Revenue Increase</i>	<i>Months Effective</i>			
Year					
2010/11	22.00%	12	287,156	287,874	288,594
2011/12	8.00%	12	-	127,711	128,031
2012/13	6.00%	12	-	-	103,705
2013/14	6.00%	12	-	-	110,202
2014/15	5.00%	12	-	-	97,588
Total Additional Water Sales Revenue			287,156	415,585	520,329
				631,832	731,000
Total Required Revenue	1,593,581	1,725,273	1,833,289	1,948,071	2,050,526
O&M Expenses					
Personnel	135,154	138,191	140,954	143,773	146,649
Operations	179,946	186,244	192,763	199,510	206,492
Water Purchases (MDWSD)	752,640	842,957	944,112	1,057,405	1,184,294
Total O&M Expenses	1,067,740	1,167,392	1,277,829	1,400,688	1,537,435
Net Operating Income	526,841	557,882	555,460	547,383	513,092
Debt Service					
Annual Debt Service (Estimated)	388,154	388,154	388,154	388,154	388,154
Total Debt Service	388,154	388,154	388,154	388,154	388,154
Calculated Debt Coverage Ratio	135%	144%	143%	141%	132%
Targeted Debt Coverage Ratio	125%	125%	125%	125%	125%
Non-Operating Revenue					
Interest Income	2,128	2,128	2,128	2,128	2,128
Total Non-Operating Revenue	2,128	2,128	2,128	2,128	2,128
Non-Operating Expenses					
Capital Outlay (excl Improvements)	5,146	5,404	5,674	5,957	6,255
Rate Funded Capital Projects	-	-	-	-	-
Total Non-Operating Expenses	5,146	5,404	5,674	5,957	6,255
Net Income (Loss) ¹	\$ 134,669	\$ 166,452	\$ 163,760	\$ 155,399	\$ 120,810

1. Positive net income to be applied to fund balances.

Source: Town of Surfside; TischlerBise.

Table 5b: Water Revenue Requirements Analysis (No Discount Program)

Description	Base Year [----- Projected -----]				
	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15
Operating Revenue					
Water Sales (before increase)	\$ 1,305,255	\$ 1,308,518	\$ 1,311,789	\$ 1,315,069	\$ 1,318,357
Tapping Fees	300	300	300	300	300
Penalties	870	870	870	870	870
Total Operating Revenue	1,306,425	1,309,688	1,312,959	1,316,239	1,319,527
Additional Rate Revenue Required					
	<i>Year</i>	<i>Revenue Increase</i>	<i>Months Effective</i>		
	2010/11	19.00%	12	247,998	248,618
	2011/12	6.00%	12	-	93,428
	2012/13	6.00%	12	-	99,281
	2013/14	6.00%	12	-	105,501
	2014/15	5.00%	12	-	93,426
Total Additional Water Sales Revenue	247,998	342,047	442,183	548,790	643,588
Total Required Revenue	1,554,423	1,651,735	1,755,143	1,865,029	1,963,115
O&M Expenses					
Personnel	135,154	138,191	140,954	143,773	146,649
Operations	119,946	124,144	128,489	132,987	137,641
Water Purchases (MDWSD)	752,640	842,957	944,112	1,057,405	1,184,294
Total O&M Expenses	1,007,740	1,105,292	1,213,555	1,334,165	1,468,584
Net Operating Income	546,684	546,443	541,587	530,864	494,531
Debt Service					
Annual Debt Service (Estimated)	388,154	388,154	388,154	388,154	388,154
Total Debt Service	388,154	388,154	388,154	388,154	388,154
Calculated Debt Coverage Ratio	141%	141%	140%	137%	127%
Targeted Debt Coverage Ratio	125%	125%	125%	125%	125%
Non-Operating Revenue					
Interest Income	2,128	2,128	2,128	2,128	2,128
Total Non-Operating Revenue	2,128	2,128	2,128	2,128	2,128
Non-Operating Expenses					
Capital Outlay (excl Improvements)	5,146	5,404	5,674	5,957	6,255
Rate Funded Capital Projects	-	-	-	-	-
Total Non-Operating Expenses	5,146	5,404	5,674	5,957	6,255
Net Income (Loss) ¹	\$ 155,511	\$ 155,014	\$ 149,888	\$ 138,881	\$ 102,250

1. Positive net income to be applied to fund balances.

Source: Town of Surfside; TischlerBise.

Table 6a: Water Utility Fund Equity Information (Discount Included)

Description	Base Year [----- Projected -----]				
	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15
Total Fund Equity - Water Only					
Beginning FY 10/11 Balance ¹	\$ 880,000	See below for fund balance allocation (dependent on Town approval)			
Restricted Net Assets - Renewal & Replacement Reserves					
Beginning Balance	\$ 660,000	\$ 134,669	\$ 301,576	\$ 420,358	\$ 420,358
Restricted Net Assets to Fund Water CIP Projects	(660,000)	-	-	-	-
Surplus from CIP Program (after bond issue)	-	455	955	-	-
Deposit from Positive Net Income	134,669	166,452	117,827	-	-
Ending Balance	\$ 134,669	\$ 301,576	\$ 420,358	\$ 420,358	\$ 420,358
Target Balance: Up to 2x Annualized R&R	420,358	420,358	420,358	420,358	420,358
Target Met?	NO	NO	YES	YES	YES
Net Income Remaining	-	-	45,934	155,399	120,810
Restricted Net Assets - Rate Stabilization Reserves					
Beginning Balance	\$ -	\$ -	\$ -	\$ 45,934	\$ 194,690
Deposit from Positive Net Income	-	-	45,934	148,756	10,246
Ending Balance	\$ -	\$ -	\$ 45,934	\$ 194,690	\$ 204,936
Target Balance: Up to 10% of Rate Revenues	159,241	172,410	183,212	194,690	204,936
Target Met?	NO	NO	NO	YES	YES
Net Income Remaining	-	-	-	6,643	110,565
Unrestricted Net Assets - Operating Reserves					
Beginning Balance	\$ 220,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 54,643
Unrestricted Net Assets to Fund Water CIP Projects	(172,000)	-	-	-	-
Deposit from Positive Net Income	-	-	-	6,643	110,565
Ending Balance	\$ 48,000	\$ 48,000	\$ 48,000	\$ 54,643	\$ 165,208
Target Balance: Up to 25% of Current Year O&M	266,935	291,848	319,457	350,172	384,359
Target Met?	NO	NO	NO	NO	NO

1. Water utility's share of total enterprise restricted and unrestricted reserves balance.

Source: Town of Surfside; TischlerBise.

Table 6b: Water Utility Fund Equity Information (No Discount Program)

Description	Base Year [----- Projected -----]				
	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15
Total Fund Equity - Water Only					
Beginning FY 10/11 Balance ¹	\$ 880,000	See below for fund balance allocation (dependent on Town approval)			

Restricted Net Assets - Renewal & Replacement Reserves					
Beginning Balance	\$ 660,000	\$ 155,511	\$ 310,980	\$ 420,358	\$ 420,358
Restricted Net Assets to Fund Water CIP Projects	(660,000)	-	-	-	-
Surplus from CIP Program (after bond issue)	-	455	955	-	-
Deposit from Positive Net Income	155,511	155,014	108,423	-	-
Ending Balance	\$ 155,511	\$ 310,980	\$ 420,358	\$ 420,358	\$ 420,358
Target Balance: Up to 2x Annualized R&R	420,358	420,358	420,358	420,358	420,358
Target Met?	NO	NO	YES	YES	YES
Net Income Remaining	-	-	41,465	138,881	102,250
Restricted Net Assets - Rate Stabilization Reserves					
Beginning Balance	\$ -	\$ -	\$ -	\$ 41,465	\$ 180,346
Deposit from Positive Net Income	-	-	41,465	138,881	15,849
Ending Balance	\$ -	\$ -	\$ 41,465	\$ 180,346	\$ 196,194
Target Balance: Up to 10% of Rate Revenues	155,325	165,056	175,397	186,386	196,194
Target Met?	NO	NO	NO	NO	YES
Net Income Remaining	-	-	-	-	86,401
Unrestricted Net Assets - Operating Reserves					
Beginning Balance	\$ 220,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000
Unrestricted Net Assets to Fund Water CIP Projects	(172,000)	-	-	-	-
Deposit from Positive Net Income	-	-	-	-	86,401
Ending Balance	\$ 48,000	\$ 48,000	\$ 48,000	\$ 48,000	\$ 134,401
Target Balance: Up to 25% of Current Year O&M	251,935	276,323	303,389	333,541	367,146
Target Met?	NO	NO	NO	NO	NO

1. Water utility's share of total enterprise fund equity balance.

Source: Town of Surfside; TischlerBise.

Cost Allocation

The cost of service allocation conducted in this study is established on the base-extra capacity method endorsed by the American Water Works Association (AWWA). Under the base-extra capacity method, revenue requirements are allocated to customer classes proportionate to their use on the water system. Allocations are based on average (base) usage, maximum (peak) usage, meters and services, and customer accounts. Use of this methodology results in an AWWA-accepted cost distribution among customer classes and a means of calculating and designing rates to proportionately recover those costs. The resulting functionalization factors that appear at the bottom of Table 7 are utilized to allocate system operating and capital costs to customers based on their demands on the system.

Table 7: Classification of Water Expenses by Function

Description	Total Water Expenses	Base Water Demand	Peak Water Demand	Customer Accounts	Meters & Services	Basis of Classification
Source of Supply						
Water Purchases	\$ 752,640	\$ 249,402	\$ 503,238	\$ -	\$ -	33.1% Base 66.9% Peak
Water Tests	5,000	1,657	3,343	-	-	33.1% Base 66.9% Peak
Total Source of Supply Expense	757,640	251,059	506,581	-	-	
Water Distribution						
Electricity	18,471	6,121	12,350	-	-	33.1% Base 66.9% Peak
Maintenance - Distribution	47,980	15,993	15,993	-	15,993	33.3% Base 33.3% Peak 33.3% Meters
Total Water Distribution Expense	66,451	22,114	28,343	-	15,993	
General & Administrative						
Personnel	135,154	-	-	67,577	67,577	50% Customers 50% Meters
Indirect Cost Allocation	27,763	-	-	13,881	13,881	50% Customers 50% Meters
Miscellaneous G&A	80,733	-	-	40,366	40,366	50% Customers 50% Meters
Total G&A Expense	243,649	-	-	121,825	121,825	
Capital Requirements						
Capital Outlay (excl Improvements)	5,146	2,059	2,059	515	515	40% Base 40% Peak 10% Customers 10% Meters
Debt Service	388,154	155,262	155,262	38,815	38,815	40% Base 40% Peak 10% Customers 10% Meters
Total Capital Requirements Expense	393,300	157,320	157,320	39,330	39,330	
TOTAL FUNCTIONALIZED COSTS	\$ 1,461,040	\$ 430,493	\$ 692,244	\$ 161,155	\$ 177,148	
FUNCTIONALIZATION FACTOR	100.0%	29.5%	47.4%	11.0%	12.1%	

Sources: Town of Surfside; TischlerBise

Tables 8a and 8b utilize the functionalization percentages to allocate revenue requirements between variable costs of the water system (base and peak demands) and fixed costs of the system (meters and services and customer accounts). The final totals are then used to design the bi-monthly base charges based on meter size and the variable rates per 1,000 gallons consumed.

Table 8a: Allocation of Water Rate Revenue Required (Discount Included)

Description	Functionalization		FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15
	Factor						
Base Water Demand	29.5%		\$ 469,202	\$ 508,005	\$ 539,831	\$ 573,652	\$ 603,840
Peak Water Demand	47.4%		754,488	816,884	868,062	922,446	970,990
Customer Accounts	11.0%		175,645	190,171	202,085	214,746	226,047
Meters & Services	12.1%		193,076	209,044	222,140	236,058	248,480
Rate Revenue Required	100.0%		\$ 1,592,411	\$ 1,724,103	\$ 1,832,119	\$ 1,946,901	\$ 2,049,356

Sources: Town of Surfside; TischlerBise.

Table 8b: Allocation of Water Rate Revenue Required (No Discount Program)

Description	Functionalization		FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15
	Factor						
Base Water Demand	29.5%		\$ 457,664	\$ 486,337	\$ 516,806	\$ 549,183	\$ 578,084
Peak Water Demand	47.4%		735,935	782,041	831,036	883,101	929,574
Customer Accounts	11.0%		171,326	182,059	193,466	205,586	216,405
Meters & Services	12.1%		188,329	200,127	212,665	225,989	237,882
Rate Revenue Required	100.0%		\$ 1,553,253	\$ 1,650,565	\$ 1,753,973	\$ 1,863,859	\$ 1,961,945

Sources: Town of Surfside; TischlerBise.

Rate Design

The final step of the rate study is the design of the water rates to collect the desired level of revenue determined in the revenue requirement analysis. For this analysis, consideration is given to both the level of rates and the structure of the rates. In determining the appropriate rate level and structure we analyzed various generated financial scenarios concerning the proposed adjustments and the implications attributed to those decisions.

The current water rate structure includes two components: a bi-monthly allotment of water use based on a customer's meter size and a consumption charge of \$3.54 per 1,000 gallons of water use. The consumption rate is the same rate regardless of customer class and does not increase or decrease with amount of water use. This structure is known as a uniform block rate. A uniform block rate approach provides revenue stability to the utility however does not send a strong conservation pricing signal to each customer.

The bi-monthly charge includes minimum water amounts depending on meter size. For example, a customer with a 5/8 inch water meter is allotted 12,000 gallons of water use on a bi-monthly basis. This allotment is included in the fixed base charge. If a 5/8 inch meter customer

uses no water up to 12,000 gallons during a billing period, the corresponding base charge is the same amount (currently \$42.48 for a 5/8 inch meter customer). If a customer consumes water above the allotted amount, the water bill is calculated using the consumption charge of \$3.54 per 1,000 gallons times the amount of water.

For this analysis, we recommend that the Town eliminate the minimum allotment approach and adopt a cost-based approach including a fixed meter charge based on a customer's meter size and a variable rate for water consumed on a 1,000 gallon basis. We have two reasons for this modification:

1. Customer Equity. We believe the current rate system to be inequitable to a group of customers who use less water than the allotted amounts. The current rate structure penalizes efficient customers and customers that use less water due to being a smaller customer (by way of small family size, small business, etc.). An efficient or small customer will typically use less than 12,000 gallons in a two-month period. In fact, Town billing records for the past year indicate that approximately 34 percent of all water customers use less than 12,000 gallons in a bi-monthly period. Whether they use 1,000 gallons or 11,000 gallons, they are still billed at the 12,000 gallon amount, or \$42.48.
2. Revenue Stability and Cost-of Service-Based. Every utility has certain costs that must be funded regardless of water consumption amounts. These costs are fixed and typically do not fluctuate. If a customer does not use any water during a billing period, there are still costs associated for past use and future service availability. These items include but are not limited to capital replacement for past use, maintenance of assets to provide water in the future, debt service, and customer service. A fixed charge system without minimum water allotments ensures the utility's fixed costs will still be met while creating a more equitable billing system.

Tables 9a and 9b below present the current and proposed bi-monthly charges with the early payment discount program included (9a) and excluded (9b). To ensure clarification, the proposed base charges for FY 2010/11 through FY 2014/15 do not include minimum water amounts.

Table 9a: Bi-Monthly Water Base Charge Rates (Discount Included)

Meter Size	Current	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15
5/8"	\$ 42.48	\$ 27.01	\$ 29.17	\$ 30.92	\$ 32.78	\$ 34.41
1"	56.64	39.28	42.43	44.97	47.67	50.05
1 1/2"	84.96	59.74	64.52	68.39	72.49	76.12
2"	127.44	84.29	91.03	96.49	102.28	107.39
3"	283.20	141.56	152.89	162.06	171.78	180.37
4"	566.40	223.38	241.26	255.73	271.07	284.63
6"	849.60	427.94	462.18	489.91	519.30	545.27
8"	1,416.00	673.41	727.28	770.92	817.18	858.04

Sources: Town of Surfside; TischlerBise.

Table 9b: BI-Monthly Water Base Charge Rates (No Discount Program)

Meter Size	Current	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15
5/8"	\$ 42.48	\$ 26.35	\$ 27.93	\$ 29.60	\$ 31.38	\$ 32.95
1"	56.64	38.32	40.62	43.05	45.64	47.92
1 1/2"	84.96	58.27	61.77	65.47	69.40	72.87
2"	127.44	82.21	87.15	92.37	97.92	102.81
3"	283.20	138.08	146.37	155.15	164.46	172.68
4"	566.40	217.89	230.97	244.82	259.51	272.49
6"	849.60	417.42	442.46	469.01	497.15	522.01
8"	1,416.00	656.85	696.26	738.04	782.32	821.44

Sources: Town of Surfside; TischlerBise.

For the variable consumption charge analysis, we present two options: 1) maintain the uniform rate approach regardless of customer class and consumption amounts, and 2) an inclining block rate structure for residential customers and a uniform block structure for all other customer classes (apartments, commercial and place of worship).

The inclining block approach is one that sends a price signal to excessive water users to cut back on their wasteful water consumption. Very efficient or low water users would be rewarded with a lower rate per 1,000 gallons compared to the current uniform rate. We applied the inclining block method to the residential customers only for two reasons: 1) there is less variation in residential water use between each customer compared to other customer classes and therefore average use figures easily apply to all residential customers, and 2) industry experience demonstrates that residential properties, particularly single-family detached residential customers, are most able to cut back on excessive use, and even discretionary use. Therefore, we recommend that the Town consider adoption of the inclining block approach to achieve conservation goals. Tables 10a and 10b illustrate the uniform rate approach utilizing the discount program and no discount program while tables 11a through 11d show the conservation-oriented approach under both discount program scenarios.

Table 10a: Option 1a - Consumption Charge Uniform Block All Customers (Discount Included)

Cost Data	FY 10/11		FY 11/12		FY 12/13		FY 13/14		FY 14/15	
Base Water Demand	\$	469,202	\$	508,005	\$	539,831	\$	573,652	\$	603,840
Peak Water Demand		754,488		816,884		868,062		922,446		970,990
Total Water Costs	\$	1,223,690	\$	1,324,889	\$	1,407,893	\$	1,496,098	\$	1,574,830
Projected Gross Annual Consumption (1,000 gal) ¹		326,005		326,820		327,637		328,456		329,277
Projected Net Annual Consumption (1,000 gal) ²		319,485		320,284		321,084		321,887		322,692
	Reduction (%)	Current				Rate per 1,000 gal				
Uniform Rate	2%	\$ 3.54	\$ 3.83	\$ 4.14	\$ 4.38	\$ 4.65	\$ 4.88			

1. Projected gross consumption inflated by customer growth assumption of 0.25%.

2. Project net consumption considers effect of elasticity of demand--as rates increase there is a corresponding decrease in demand. Assumes a 2% demand reduction for each fiscal year.

Sources: Town of Surfside; TischlerBise.

Table 10b: Option 1b - Consumption Charge Uniform Block All Customers (No Discount Program)

Cost Data	FY 10/11		FY 11/12		FY 12/13		FY 13/14		FY 14/15	
Base Water Demand	\$	457,664	\$	486,337	\$	516,806	\$	549,183	\$	578,084
Peak Water Demand		735,935		782,041		831,036		883,101		929,574
Total Water Costs	\$	1,193,599	\$	1,268,378	\$	1,347,842	\$	1,432,284	\$	1,507,658
Projected Gross Annual Consumption (1,000 gal) ¹		326,005		326,820		327,637		328,456		329,277
Projected Net Annual Consumption (1,000 gal) ²		319,485		320,284		321,084		321,887		322,692
	Reduction (%)	Current				Rate per 1,000 gal				
Uniform Rate	2%	\$ 3.54	\$ 3.74	\$ 3.96	\$ 4.20	\$ 4.45	\$ 4.67			

1. Projected gross consumption inflated by customer growth assumption of 0.25%.

2. Project net consumption considers effect of elasticity of demand--as rates increase there is a corresponding decrease in demand. Assumes a 2% demand reduction for each fiscal year.

Sources: Town of Surfside; TischlerBise.

Table 11a: Option 2 - Consumption Charge Inclining Block Residential Customers (Discount Included)

Description	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15		
Residential Base Water Demand	\$ 372,368	\$ 403,162	\$ 428,421	\$ 455,261	\$ 479,219		
Residential Peak Water Demand	598,776	648,295	688,911	732,071	770,596		
Total Residential Water Costs	\$ 971,144	\$ 1,051,458	\$ 1,117,331	\$ 1,187,332	\$ 1,249,816		
Projected Gross Annual Residential Consumption (1,000 gal) ¹	258,724	259,371	260,019	260,669	261,321		
Projected Net Annual Consumption (1,000 gal) ²	250,962	251,590	252,219	252,849	253,481		
Projected Net Consumption per Block (1,000 gal) ²							
Indoor Water Use, Block 1 (0 - 12,000 gal)	85,327	85,540	85,754	85,969	86,184		
Discretionary Water Use, Block 2 (12,001 - 24,000 gal)	133,010	133,343	133,676	134,010	134,345		
Excessive Water Use, Block 3 (above 24,000 gal)	32,625	32,707	32,788	32,870	32,953		
	Price Differential	Current	Rate per 1,000 gal				
Block 1 (0 - 12,000 gal)	1.00	3.54	3.22	3.48	3.69	3.91	4.10
Block 2 (12,001 - 24,000 gal)	1.14	3.54	3.67	3.96	4.20	4.45	4.68
Block 3 (above 24,000 gal)	1.98	3.54	6.38	6.89	7.30	7.74	8.13

1. Projected gross consumption inflated by customer growth assumption of 0.25%.

2. Project net consumption considers effect of elasticity of demand--as rates increase there is a corresponding decrease in demand. Assumes a 3% demand reduction for each fiscal year.

Sources: Town of Surfside; TischlerBise.

Table 11b: Option 2 - Consumption Charge Inclining Block Apartment, Commercial & Place of Worship Customers (Discount Included)

Description	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15	
Apt, Comm & Place of Worship Base Water Demand	\$ 96,834	\$ 104,842	\$ 111,411	\$ 118,390	\$ 124,621	
Apt, Comm & Place of Worship Peak Water Demand	155,712	168,589	179,151	190,375	200,393	
Total Water Costs	\$ 252,546	\$ 273,431	\$ 290,562	\$ 308,765	\$ 325,014	
Projected Gross Annual Consumption (1,000 gal) ¹	67,281	67,449	67,618	67,787	67,956	
Projected Net Annual Consumption (1,000 gal) ²	67,281	67,449	67,618	67,787	67,956	
	Current		Rate per 1,000 gal			
Uniform Rate	\$ 3.54	\$ 3.75	\$ 4.05	\$ 4.30	\$ 4.55	\$ 4.78

1. Projected gross consumption inflated by customer growth assumption of 0.25%.

2. Project net consumption considers effect of elasticity of demand--as rates increase there is a corresponding decrease in demand. Assumes a 3% demand reduction for each fiscal year.

Sources: Town of Surfside; TischlerBise.

Table 11c: Option 2 - Consumption Charge Inclining Block Residential Customers (No Discount Program)

Description	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15		
Residential Base Water Demand	\$ 363,211	\$ 385,966	\$ 410,147	\$ 435,843	\$ 458,779		
Residential Peak Water Demand	584,052	620,643	659,527	700,846	737,728		
Total Residential Water Costs	\$ 947,263	\$ 1,006,609	\$ 1,069,673	\$ 1,136,689	\$ 1,196,507		
Projected Gross Annual Residential Consumption (1,000 gal) ¹	258,724	259,371	260,019	260,669	261,321		
Projected Net Annual Consumption (1,000 gal) ²	250,962	251,590	252,219	252,849	253,481		
	Projected Net Consumption per Block (1,000 gal) ²						
Indoor Water Use, Block 1 (0 - 12,000 gal)	85,327	85,540	85,754	85,969	86,184		
Discretionary Water Use, Block 2 (12,001 - 24,000 gal)	133,010	133,343	133,676	134,010	134,345		
Excessive Water Use, Block 3 (above 24,000 gal)	32,625	32,707	32,788	32,870	32,953		
	Price Differential	Current	Rate per 1,000 gal				
Block 1 (0 - 12,000 gal)	1.00	3.54	3.14	3.33	3.53	3.74	3.93
Block 2 (12,001 - 24,000 gal)	1.14	3.54	3.58	3.79	4.02	4.26	4.48
Block 3 (above 24,000 gal)	1.98	3.54	6.22	6.59	6.99	7.41	7.78

1. Projected gross consumption inflated by customer growth assumption of 0.25%.

2. Project net consumption considers effect of elasticity of demand--as rates increase there is a corresponding decrease in demand. Assumes a 3% demand reduction for each fiscal year.

Sources: Town of Surfside; TischlerBise.

Table 11d: Option 2 - Consumption Charge Inclining Block Apartment, Commercial & Place of Worship Customers (No Discount Program)

Description	FY 10/11		FY 11/12		FY 12/13		FY 13/14		FY 14/15			
Apt, Comm & Place of Worship Base Water Demand	\$	94,453	\$	100,370	\$	106,659	\$	113,341	\$	119,305		
Apt, Comm & Place of Worship Peak Water Demand		<u>151,883</u>		<u>161,398</u>		<u>171,510</u>		<u>182,255</u>		<u>191,846</u>		
Total Water Costs	\$	246,336	\$	261,768	\$	278,168	\$	295,595	\$	311,151		
Projected Gross Annual Consumption (1,000 gal) ¹		67,281		67,449		67,618		67,787		67,956		
Projected Net Annual Consumption (1,000 gal) ²		67,281		67,449		67,618		67,787		67,956		
	Current				Rate per 1,000 gal							
Uniform Rate	\$	3.54	\$	3.66	\$	3.88	\$	4.11	\$	4.36	\$	4.58

1. Projected gross consumption inflated by customer growth assumption of 0.25%.

2. Project net consumption considers effect of elasticity of demand--as rates increase there is a corresponding decrease in demand. Assumes a 3% demand reduction for each fiscal year.

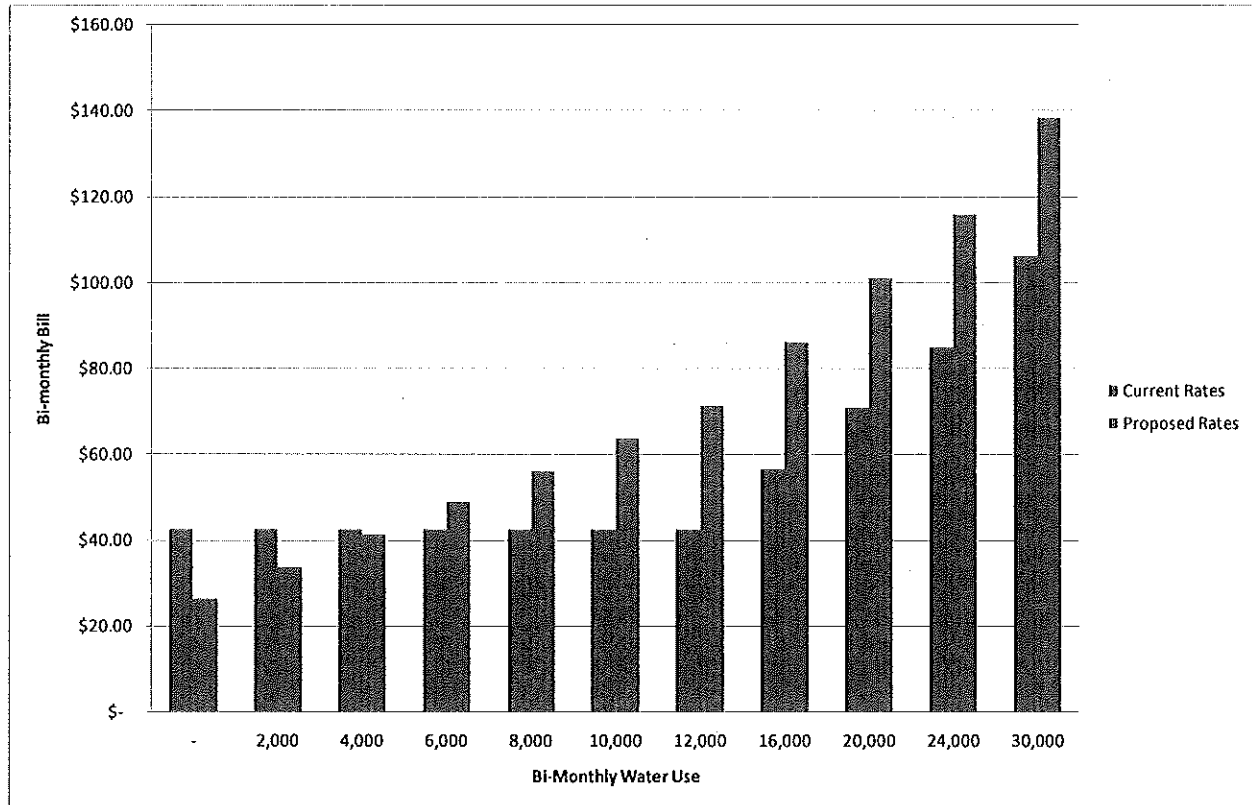
Sources: Town of Surfside; TischlerBise.

Customer Impact Analysis

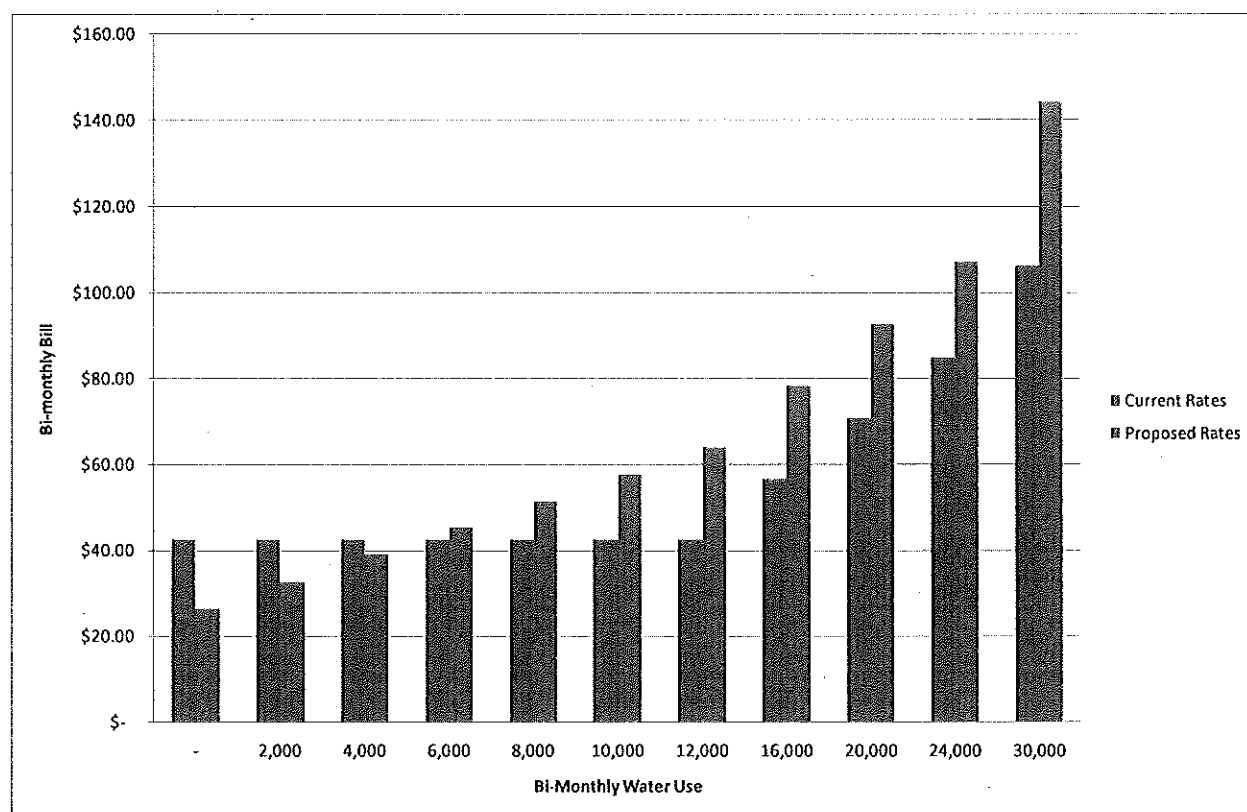
For this analysis, we only show the impact of the proposed rate options for a Residential 5/8 inch meter customer with no discount program in place and no minimum water allotments. For

the final report and presentations, we will present impact analyses for other customer groups and comparisons with other jurisdictions in Miami-Dade County.

Option 1: No Min., No Discount, Residential 5/8 inch Meter, Uniform Variable Rate



Option 2: No Min., No Discount, Residential 5/8 inch Meter, Inclining Block Rate



Sewer System Rate Analysis

The following section describes the revenue requirements analysis for each utility.

Revenue Requirements Analysis

Table 12 presents the sewer-related 5-year capital improvement plan as prepared by the Town's engineering consultant. The table lists the outside funding sources to be utilized for the capital projects including accumulated restricted and unrestricted net asset reserves, nominal sewer impact fees, and bond proceeds from a proposed revenue bonds issue for both water and sewer related capital construction projects. The combined effect of these outside funding sources is to eliminate the need for future rate revenues to directly fund these projects. However, the rates will be required to fund the debt service obligations on the revenue bonds.

Table 13 summarizes the draft financial analysis for the sewer system. This table includes projected annual revenues anticipated using rate increases, the operating and non-operating expenses, debt service requirements, and net income calculations. Table 14 presents the fund balance information as described earlier in this memorandum. Similar to the water revenue requirements analysis, the required revenue increase percentages do not equate to the proposed

rate increase for each customer. Rather, *these percentage figures describe the amount of additional rate revenue required to meet all utility obligations and policies.*

Table 12: Allocated Sewer Capital Improvement Program

Project	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15	Total
Engineering/Architecture	\$ 78,200	\$ 26,000	\$ -	\$ -	\$ -	\$ 104,200
Construction	3,908,900	1,023,123	-	-	-	4,932,023
Prior CIP Appropriations	621,988	-	-	-	-	621,988
Total Sewer Capital Projects	\$ 4,609,088	\$ 1,049,123	\$ -	\$ -	\$ -	\$ 5,658,211
Less: Outside Funding Sources						
Sewer Impact Fees	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	
Restricted Net Assets - Repair & Replacement	540,000	-	-	-	-	
Unrestricted Assets	118,000					
Revenue Bonds Proceeds	5,000,000	-	-	-	-	
Carry-over from Prior FY	-	1,049,412	789	1,289	1,789	
Total Outside Funding	\$ 5,658,500	\$ 1,049,912	\$ 1,289	\$ 1,789	\$ 2,289	
Balance to Carry Over to Next FY	\$ 1,049,412	\$ 789	\$ 1,289	\$ 1,789	\$ 2,289	
Net CIP Projects Funded from Rates	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Source: Town of Surfside; TischlerBise.

Table 13: Sewer Revenue Requirements Analysis

Description	Base Year [----- Projected -----]				
	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15
Operating Revenue					
Sewer Service Charges (before increase)	\$ 1,407,825	\$ 1,411,344	\$ 1,414,873	\$ 1,418,410	\$ 1,421,956
Penalties	870	870	870	870	870
Total Operating Revenue	1,408,695	1,412,214	1,415,743	1,419,280	1,422,826
Additional Rate Revenue Required					
	<i>Year</i>	<i>Revenue Increase</i>	<i>Months Effective</i>		
	2010/11	20.00%	12	281,565	282,269
	2011/12	8.00%	12	-	135,489
	2012/13	8.00%	12	-	146,694
	2013/14	7.00%	12	-	138,972
	2014/15	6.00%	12	-	127,776
Total Additional Sewer Charge Revenue	281,565	417,758	565,496	705,882	835,423
Total Required Revenue	1,690,260	1,829,972	1,981,239	2,125,162	2,258,249
O&M Expenses					
Personnel	158,984	162,557	165,808	169,124	172,506
Operations	135,214	139,946	144,844	149,914	155,161
Sewage Disposal (City of Miami Beach)	834,197	959,327	1,103,226	1,268,710	1,459,016
Total O&M Expenses	1,128,395	1,261,830	1,413,878	1,587,748	1,786,684
Net Operating Income	561,864	568,142	567,361	537,415	471,666
Debt Service					
Annual Debt Service (Estimated)	377,151	377,151	377,151	377,151	377,151
Total Debt Service	377,151	377,151	377,151	377,151	377,151
Calculated Debt Coverage Ratio	149%	151%	150%	142%	125%
Targeted Debt Coverage Ratio	125%	125%	125%	125%	125%
Non-Operating Revenue					
Interest Income	2,128	2,128	2,128	2,128	2,128
Total Non-Operating Revenue	2,128	2,128	2,128	2,128	2,128
Non-Operating Expenses					
Capital Outlay (excl Improvements)	6,054	6,356	6,674	7,008	7,358
Rate Funded Capital Projects	-	-	-	-	-
Total Non-Operating Expenses	6,054	6,356	6,674	7,008	7,358
Net Income (Loss) ¹	\$ 180,788	\$ 186,763	\$ 185,664	\$ 155,384	\$ 89,185

1. Positive net income to be applied to fund balances.

Source: Town of Surfside; TischlerBise.

Table 14: Sewer Utility Fund Equity Information (Proposed)

Description	Base Year	Projected			
	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15
Total Fund Equity - Sewer Only					
Beginning FY 10/11 Balance ¹	\$ 760,000	See below for fund balance allocation (dependent on Town approval)			
Restricted Net Assets - Renewal & Replacement Reserves					
Beginning Balance	\$ 540,000	\$ 180,788	\$ 368,340	\$ 521,202	\$ 521,202
Restricted Net Assets to Fund Sewer CIP Projects	(540,000)	-	-	-	-
Surplus from CIP Program (after bond issue)	-	789	1,289	-	-
Deposit from Positive Net Income	180,788	186,763	151,573	-	-
Ending Balance	\$ 180,788	\$ 368,340	\$ 521,202	\$ 521,202	\$ 521,202
Target Balance: Up to 2x Annualized R&R	521,202	521,202	521,202	521,202	521,202
Target Met?	NO	NO	YES	YES	YES
Net Income Remaining	-	-	34,091	155,384	89,185
Restricted Net Assets - Rate Stabilization Reserves					
Beginning Balance	\$ -	\$ -	\$ -	\$ 34,091	\$ 189,476
Deposit from Positive Net Income	-	-	34,091	155,384	36,262
Ending Balance	\$ -	\$ -	\$ 34,091	\$ 189,476	\$ 225,738
Target Balance: Up to 10% of Rate Revenues	168,939	182,910	198,037	212,429	225,738
Target Met?	NO	NO	NO	NO	YES
Net Income Remaining	-	-	-	-	52,922
Unrestricted Net Assets - Operating Reserves					
Beginning Balance	\$ 220,000	\$ 102,000	\$ 102,000	\$ 102,000	\$ 102,000
Unrestricted Net Assets to Fund Sewer CIP Projects	(118,000)	-	-	-	-
Deposit from Positive Net Income	-	-	-	-	52,922
Ending Balance	\$ 102,000	\$ 102,000	\$ 102,000	\$ 102,000	\$ 154,922
Target Balance: Up to 25% of Current Year O&M	282,099	315,457	353,470	396,937	446,671
Target Met?	NO	NO	NO	NO	NO

1. Sewer utility's share of total enterprise fund equity balance.

Source: Town of Surfside; TischlerBise.

Cost Allocation

The cost of service allocation conducted in this study is a simple allocation between customer sewer flow data based on Town billing records and total number of sewer customer accounts. This is one approach endorsed by the Water Environment Federation (WEF) for sewer rate setting in the United States. Under this approach, revenue requirements are allocated to customer classes proportionate to their use of the sewer system. Use of this methodology results in a means of calculating and designing rates to proportionately recover sewer service costs. The resulting functionalization factors that appear at the bottom of Table 15 are utilized to allocate system operating and capital costs to customers based on their demands on the system.

Table 16 utilizes the functionalization percentages to allocate revenue requirements between variable costs of the sewer system and fixed costs of the system and will be utilized for one of the sewer rate structure options. The final totals are then used to design the bi-monthly base charges.

Table 15: Classification of Sewer Expenses by Function

Description	Total Sewer Expenses	Flow	Customer Accounts	Basis of Classification
Collection and Transmission				
Sewage Disposal	\$ 834,197	\$ 834,197	\$ -	100% Flow
Electricity	21,727	21,727	-	100% Flow
Maintenance	56,440	56,440	-	100% Flow
Total Collection and Transmission Expense	912,365	912,365	-	
General & Administrative				
Personnel	158,984	79,492	79,492	50% Flow 50% CA
Indirect Cost Allocation	32,658	16,329	16,329	50% Flow 50% CA
Miscellaneous G&A	24,388	12,194	12,194	50% Flow 50% CA
Total G&A Expense	216,031	108,015	108,015	
Capital Requirements				
Capital Outlay (excl Improvements)	6,054	5,448	605	90% Flow 10% CA
Debt Service	377,151	339,436	37,715	90% Flow 10% CA
Total Capital Requirements Expense	383,204	344,884	38,320	
TOTAL FUNCTIONALIZED COSTS	\$ 1,511,600	\$ 1,365,264	\$ 146,336	
FUNCTIONALIZATION FACTOR	100.0%	90.3%	9.7%	

Sources: Town of Surfside; TischlerBise.

Table 16: Allocation of Sewer Rate Revenue Required

Description	Functionalization Factor	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15
Sewer Flow	90.3%	\$ 1,525,842	\$ 1,652,030	\$ 1,788,652	\$ 1,918,643	\$ 2,038,846
Customer Accounts	9.7%	163,547	177,073	191,717	205,650	218,534
Rate Revenue Required	100.0%	\$ 1,689,390	\$ 1,829,102	\$ 1,980,369	\$ 2,124,292	\$ 2,257,379

Sources: Town of Surfside; TischlerBise.

Rate Design

The final step of the sewer rate study is the design of rates to collect the desired level of revenue determined in the revenue requirement analysis. For this analysis, consideration is given to both

the level of rates and the structure of the rates. In determining the appropriate rate level and structure we analyzed various generated financial scenarios concerning the proposed adjustments and the implications attributed to those decisions.

The current sewer rate structure comprises a single rate per 1,000 gallons of estimated sewage flow from each customer regardless of customer class. The bi-monthly charge includes minimum flow amounts depending on meter size similar to the current water rate structure. Like the water structure, we raise the same equity considerations for the sewer rate structure.

For this analysis, we recommend that the Town eliminate the minimum allotment approach and adopt a cost-based approach including a fixed charge per customer account and a variable rate for effluent flow on a 1,000 gallon basis. We have two reasons for this modification:

1. Customer Equity. We believe the current rate system to be inequitable to a group of customers who produce less effluent flow than the allotted amounts. The current rate structure penalizes low flow customers.
2. Revenue Stability and Cost-of Service-Based. Every utility has certain costs that must be funded regardless of sewage flow amounts. Similar to water, these costs are fixed and typically do not fluctuate. These items include but are not limited to capital replacement for past use, maintenance of assets to provide sewage disposal services in the future, debt service, and customer service. A fixed charge system without minimum allotments ensures the utility's fixed costs will still be met while creating a more equitable billing system.

Table 17 presents Option 1 for the proposed sewer rates. This option includes the current approach of charging a customer solely based on their estimated sewage flow on a per 1,000 gallon basis. However, we recommend the Town eliminate the minimum allotment component.

Tables 18 and 19 present Option 2 where the sewer rate structure consists of a fixed portion and a variable element. The fixed portion would be a flat rate for all customer accounts on a bi-monthly basis. Because sewer flow is not a metered service we recommend a flat rate per customer account to fund the fixed costs of the sewer system. This option also considers a variable rate based on estimated sewer flow by customer account.

Table 17: Option 1 - Variable Charge Only, All Customers

Cost Data	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15	
Sewer Flow Costs	\$ 1,525,842	\$1,652,030	\$1,788,652	\$1,918,643	\$2,038,846	
Customer Account Costs	163,547	177,073	191,717	205,650	218,534	
Total Sewer Costs	\$ 1,689,390	\$1,829,102	\$1,980,369	\$2,124,292	\$2,257,379	
Projected Annual Flow (1,000 gal) ¹	268,415	269,086	269,759	270,433	271,109	
	Current		Rate per 1,000 gal			
Uniform Rate	\$ 4.69	\$ 6.29	\$ 6.80	\$ 7.34	\$ 7.86	\$ 8.33

1. Projected sewer flow inflated by customer growth assumption of 0.25%.

Sources: Town of Surfside; TischlerBise.

Table 18: Option 2 - Variable Charge All Customers

Cost Data	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15	
Sewer Flow Costs	\$1,525,842	\$1,652,030	\$1,788,652	\$1,918,643	\$2,038,846	
Projected Annual Flow (1,000 gal) ¹	268,415	269,086	269,759	270,433	271,109	
	Current		Rate per 1,000 gal			
Uniform Variable Rate	\$ 4.69	\$ 5.68	\$ 6.14	\$ 6.63	\$ 7.09	\$ 7.52

1. Projected sewer flow inflated by customer growth assumption of 0.25%.

Sources: Town of Surfside; TischlerBise.

Table 19: Option 2 - Fixed Charge All Customers

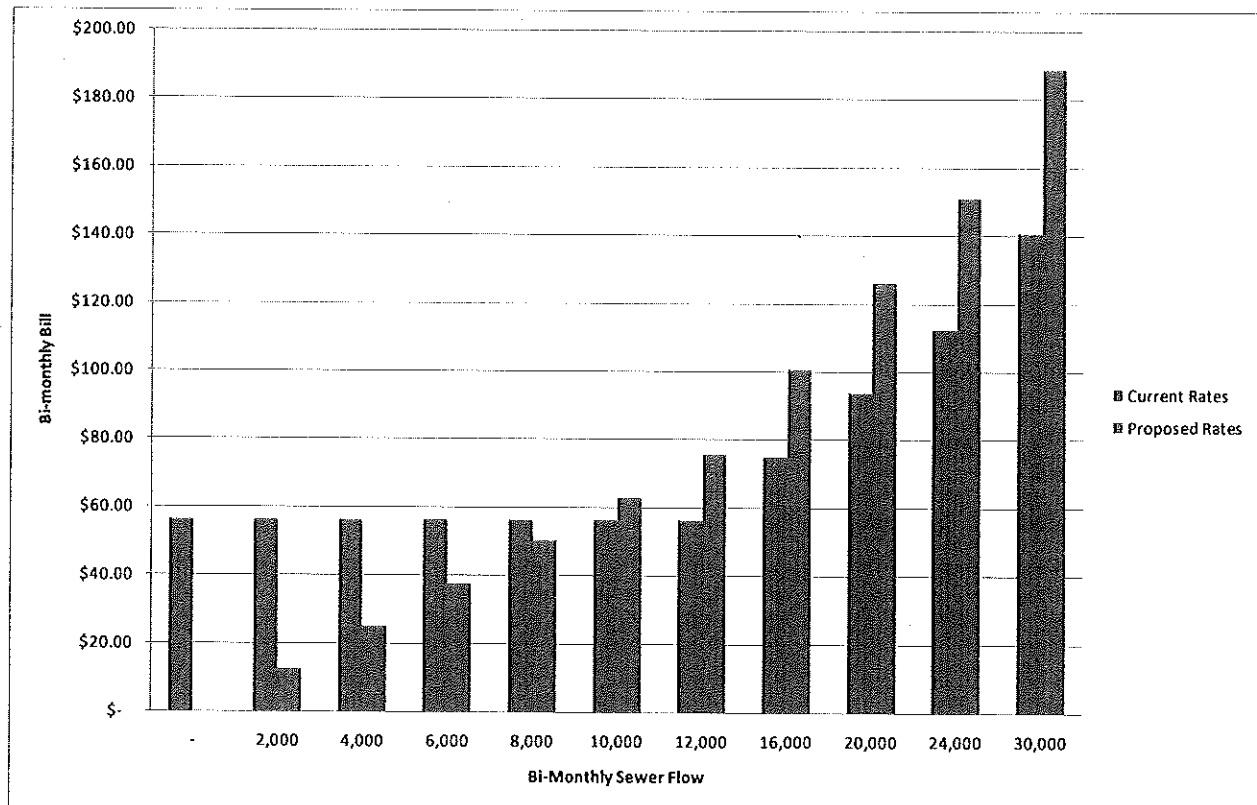
Cost Data	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15	
Customer Account Costs	\$ 163,547	\$ 177,073	\$ 191,717	\$ 205,650	\$ 218,534	
Projected Customers	1,360	1,364	1,367	1,371	1,374	
	Current		Rate per 1,000 gal			
Bi-Monthly Fixed Charge	NA	\$ 20.04	\$ 21.64	\$ 23.37	\$ 25.01	\$ 26.51

Sources: Town of Surfside; TischlerBise.

Customer Impact Analysis

For this analysis, we only show the impact of the proposed rate options for a typical 5/8 inch residential customer with no minimum sewer flow allotments. For the final report and presentations, we will present impact analyses for other customer groups and comparisons with other jurisdictions in Miami-Dade County.

Option 1: No Minimum, Residential 5/8 inch Meter, Variable Rate Only



Option 2: No Minimum, Residential 5/8 inch Meter, Fixed Charge and Variable Rate

